



Sustainable Cooling Towards a Cool COP28

THE COOLING CHALLENGE

In a warming world, cooling is not a luxury but a necessity.

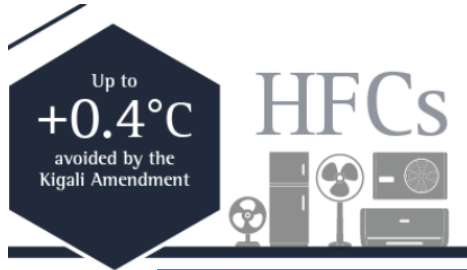
- Equitable access to cooling protects people against extreme heat, keeps food fresh, and vaccines stable.
- Heat stress results in global economic losses: ILO projects that heat stress could lead to 80m jobs being lost with losses of US\$2.3 trillion (ILO 2019)
- Extreme heat impacts health: almost one-third of the world's population faces dangerous temperatures for more than 20 days a year.
- Lack of cooling impacts food supply: Lack of effective refrigeration results in losses amounting to 12% of total food production (UNEP-FAO, 2022)

But the more we cool, the more we heat the planet.

- Demand for space cooling is already straining the grids and this will escalate: the energy requirement for space cooling is predicted to jump 300% – from 2,020 TWh in 2016 to 6,200 TWh in 2050.
- Cooling is a top driver of electricity and peak demand: cooling accounts for 20% of global electricity consumption (UNEP 2023). By 2050, space cooling will account for 30-50% of the peak electricity load (IEA 2022)
- One of the biggest contributors to global warming: accounting for 7% of global GHG emissions. Without policy intervention, this is expected to more than double by 2050 (IEA 2022, UNEP 2023).



THE COOLING OPPORTUNITY

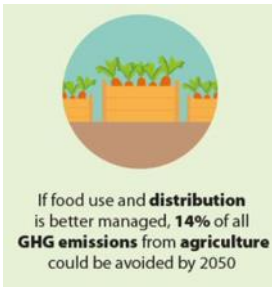


Action under the **Kigali Amendment to the Montreal Protocol** to phase down the production and use of HFCs could avoid up to 0.4 degrees C. of global warming. Coupling the transition with energy efficient cooling doubles the climate benefits.

Adopting **higher efficiency standards** can more than double the efficiency of AC units on the market and reduce cooling energy demand by 45%

Doubling the efficiency of air cooling would reduce the need for

1,300 GW by 2050



If food use and **distribution** is better managed, **14%** of all **GHG emissions** from **agriculture** could be avoided by 2050

Just halving food loss with **refrigeration and food cold chains** could feed 1 billion

Efficient cooling generates savings of nearly USD 3 trillion between now and 2050 with average cooling energy costs almost halving



Stronger policy action on sustainable cooling can save sixty-two billion tonnes CO2e between now-2050, improve the lives of hundreds of millions, and realize huge financial savings

TO SEIZE THIS OPPORTUNITY, WE NEED TO SCALE-UP POLICY ACTION, ACCESS TO LOW-COST FINANCE, AND CROSS-STAKEHOLDER COORDINATION

GLOBAL COOLING PLEDGE



WHEN?

In January, at the Abu Dhabi Sustainability Week the COP28 UAE Presidency announced the development of the **Global Cooling Pledge**. It will be launched at COP28.



"We must move away from cooling systems that are inefficient and polluting and provide equitable access to climate-friendly cooling solutions. We will work with the Cool Coalition and UNEP to elevate this issue and look forward to showcasing solutions at COP28 this year."

His Excellency, Dr. Sultan Al Jaber,
COP28 President-Designate



"Expanding cooling will protect the most vulnerable communities from extreme heat, keep food fresh and vaccines safe, employees productive and digital economies viable. I am pleased that cooling has been put on the global agenda of the next UN Climate Change Conference"

Inger Anderson, Executive Director,
UNEP

WHAT?

Raises ambition for countries to work together to **reduce global cooling-related emissions across all sectors by at least 68 percent** below 2022 levels by 2050, **improve energy efficiency** alongside the HFC phase-down and to **increase access to sustainable cooling** for the most vulnerable.

HOW?

Calls for policy progress and action on super-efficient appliances, smart buildings, nature-based solutions, food and vaccine cold chains, renewable energy for rural, remote, off-grid among others.

WHO?

The voluntary Pledge invites international collaboration among **governments** to sign up to individual government commitments which will be aggregated and monitored collectively. There are also commitments for local governments, private sector and other non-state actors to support.

WHY?

Achieving the Pledge targets would **cut emissions by approximately 78 billion tonnes CO₂e** between 2022 - 2050, improve the lives of hundreds of millions, and realize huge financial savings

COOL COALITION: DELIVERY PARTNER TO COP28



The COP28 UAE presidency invited UNEP as the host of the **Cool Coalition** to become the delivery partner to the Global Cooling Pledge.

Since 2019, UNEP Cool Coalition convenes **over 130 partners** to advocate, deliver science, and take comprehensive action on sustainable cooling.

The Coalition is an official outcomes and **“Transformation Initiatives”** put forward by the UN Secretary General at the 2019 UN Climate Action Summit.

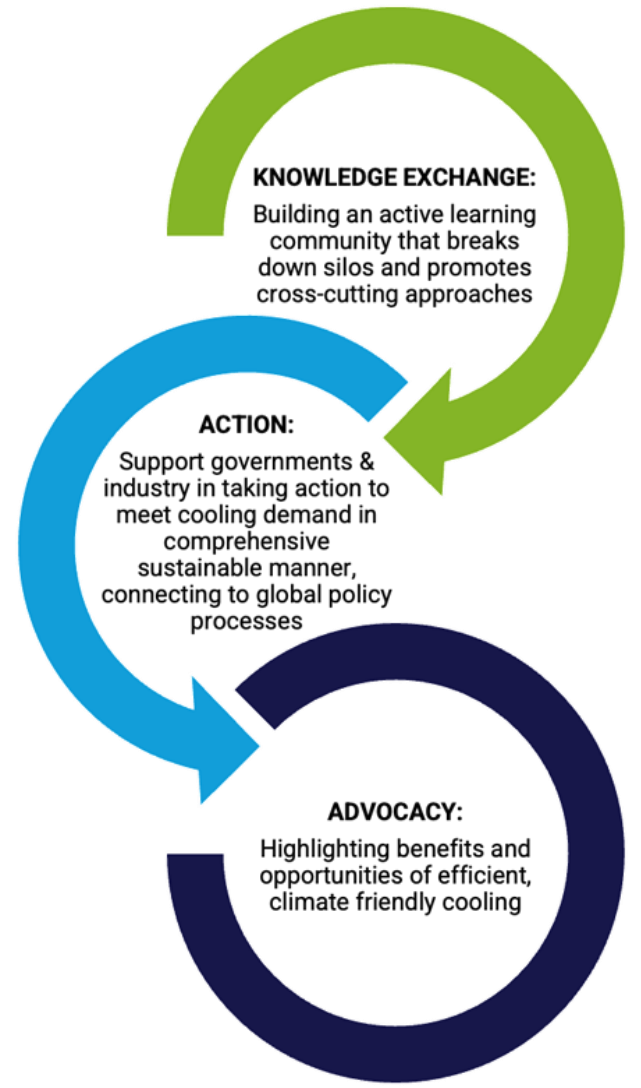
SO FAR

- **Technical expertise** to develop the Global Cooling Pledge
- Stakeholder consultations with **100+ non-state actors** and **40 countries** including G20 ETWG

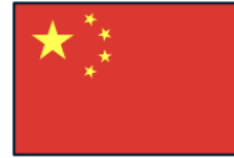


NEXT STEPS

- **Monitoring commitments to the Global Cooling Pledge**
- **Supporting implementation of commitments to the Pledge**
- **Unlocking cooling finance**



DEVELOPING THE PLEDGE: CONSULTATIONS



Since January, developed through consultations with 100+ non-state actors and 40 countries

CEM14/MI-8 : HIGH LEVEL MINISTERIAL DIALOGUE

Consultations culminated at the **G20 Energy Ministerial / 14th Clean Energy Ministerial and 8th Mission Innovation meeting** in Goa, India, where COP 28 President-Designate, along with Indian and Danish Ministers and partners, united to champion sustainable cooling and call on countries to **join the Global Cooling Pledge**.

We have a unique opportunity to deliver a significant, collective response to the cooling challenge via the Global Cooling Pledge. This pledge aims to improve energy efficiency and increase access to sustainable cooling.

It is gaining momentum with more than 20 early supporters. I call on all countries to join the Global Cooling Pledge in the lead up to COP28.



His Excellency Dr. Sultan Ahmed Al Jaber

COP28 President-Designate, UAE Special Envoy for Climate Change, and Minister of Industry and Advanced Technology



Achieving the Global Goals requires the collective effort of every sector, including society and government at all levels. All hands on deck are essential.

This voluntary pledge offers state and non-state actors a unique chance to enhance voluntary commitments to climate mitigation, adaptation, resilience and investments towards sustainable cooling.



Ligia Noronha

United Nations Assistant Secretary-General and Head of the New York Office at UNEP



We must meet the needs of the underserved with efficient solutions that will reduce energy demand and accelerate decarbonization efforts.

Over the next few months, Sustainable Energy for All is looking forward to working on the success of the Global Cooling Pledge, and subsequently support countries to implement the solutions after the Pledge.



Damilola Ogunbiyi

CEO and Special Representative of the UN Secretary-General for Sustainable Energy for All, and Co-Chair of UN-Energy



It is clear that achieving universal access to sustainable cooling requires international corporation, dedicated climate finance, and leadership from key players.

As a cool champion, Denmark supports the efforts of the COP28 UAE Presidency and the Cool Coalition to raise the ambitions for sustainable cooling through the Global Cool Pledge.



His Excellency Dan Jørgensen

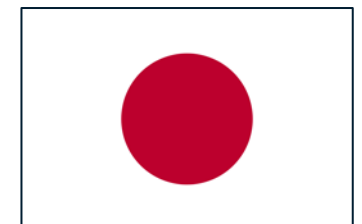
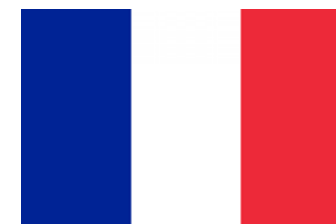
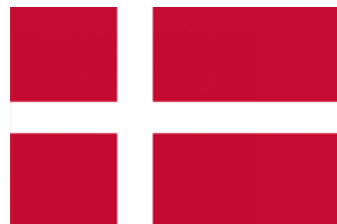
Danish Minister for Development Cooperation and Global Climate Policy, and Cool Champion



NEGOTIATING THE PLEDGE TEXT: CONTACT GROUP

Following consultations, the COP28 Presidency set-up an **advisory group of countries** to negotiate the text and commitments of the Pledge. The negotiations are in progress to be completed by the end of September.

Members of the Contact Group include:



This is an open group. Interested member states are welcome to join this Advisory Group. Please to contact unep-coolcoalition@un.org and/or mikael.melin@cop28.com

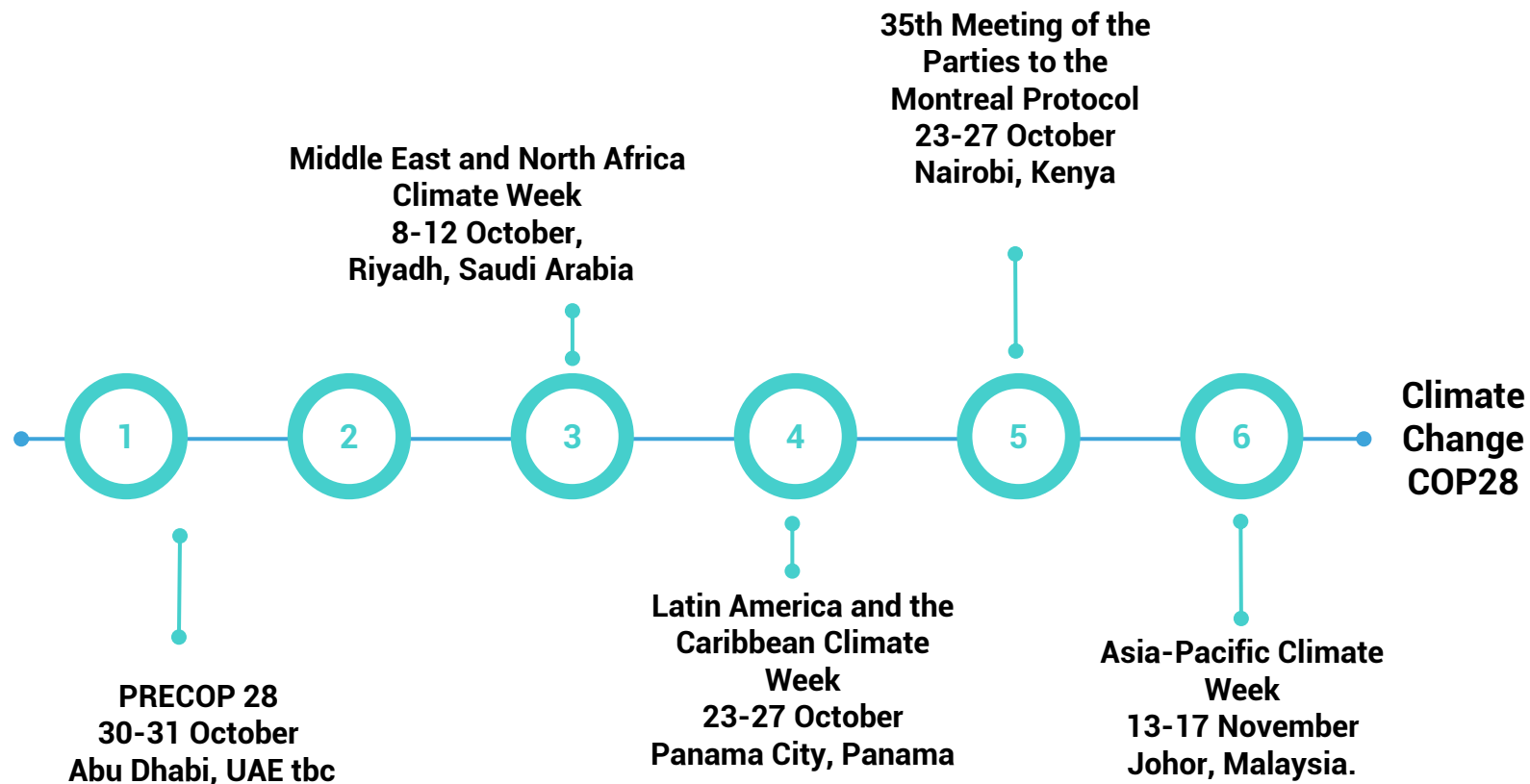
GLOBAL COOLING PLEDGE - EXAMPLES OF COMMITMENTS



- ***Commit to* complete the ratification of the Kigali Amendment, if not already completed.**
- ***Commit to* work together to collectively increase the average efficiency rating of new air conditioning equipment sold by 50% by 2030 from global 2022 baseline;**
- ***Commit to* establish MEPS and routinely raise ambition and progress in relation to U4E model regulation guidelines, or the SEAD product efficiency call to action, or global Best Available Technology consistent with national laws, and towards Net-Zero Emissions by 2050;**
- ***Commit to* public procurement of low GWP and high efficiency cooling technologies focused on the lowest lifecycle cost in government buildings, including passive solutions , by 2030 to prime the private sector market;**
- ***Commit to* establish building energy codes or guidelines that incorporate market appropriate passive cooling and energy efficiency strategies by 2030, and encourage their adoption at the sub-national level;**
- ***Commit to* publishing a national cooling action plan, regulation, or equivalent strategy and to reflect actions in Nationally Determined Contributions to the Paris Agreement and HFC Phase-Down plans as appropriate;**
- ***Commit to* maintaining up-to-date and publicly available information on policies and commitments relevant to the Pledge with a minimum requirement to measure and report on annual in country sales of cooling equipment including energy efficiency;**

MOBILIZING SIGNATORIES TO THE GLOBAL COOLING PLEDGE

From October to December, COP28 UAE will mobilize signatories to the Pledge including at key events and with 'Cool Champions' who will lead by example on sustainable cooling and share the scientific case for action.



H.E. Dan Jørgensen, Minister for
Development Cooperation and
Global Climate Policy of Denmark



H.E. Soipan Tuya, Minister for
Environment, Climate Change and
Forestry, Kenya

Join the effort as 'Cool Champions'

COOLING AT COP28: LAUNCH OF THE PLEDGE



ENERGY AND INDUSTRY / JUST
TRANSITION / INDIGENOUS
PEOPLES

The Global Cooling Pledge will be launched with signatories via a Ministerial at COP28 **on Energy and Industry Day on December 5.**

The official COP28 thematic programme highlights a **“special additional focus on cooling as a critical mitigation and adaptation factor”**

Tracking of commitments to the Pledge will be done through a Ministerial Report back to subsequent COPs and through the modelling and data collection infrastructure set up for **UNEP Cooling Spotlight Report: Keeping Cool in an Increasing Hot World** - also launched on December 5.



NEXT STEPS: REVIEW THE PLEDGE



We seek UNEP CPR guidance on the Global Pledge Consultation process and to share information on who to contact in your Governments if there is interest to review the Pledge.

JOIN THE PLEDGE

Government ministries can send a letter to COP28UAE to Mikael Melin mikael.melin@cop28.com and UNEP-led Cool Coalition unep-coolcoalition@un.org indicating they endorse the Global Cooling Pledge and providing a point of contact for follow up.

BECOME A COOL CHAMPION

'Cool Champions' will showcase their leadership on sustainable cooling, share the scientific case for action, and encourage their peers to become Pledge signatories

THE COOL COALITION

Be in touch with the Secretariat at unep-coolcoalition@un.org to receive and sign the common endorsement form.



CONTACT US

UNEP-led Cool Coalition: Lily Riahi, Coordinator, lily.riahi@un.org; Secretariat, unep-coolcoalition@un.org

COP28 UAE: Mikael Melin, mikael.melin@cop28.com

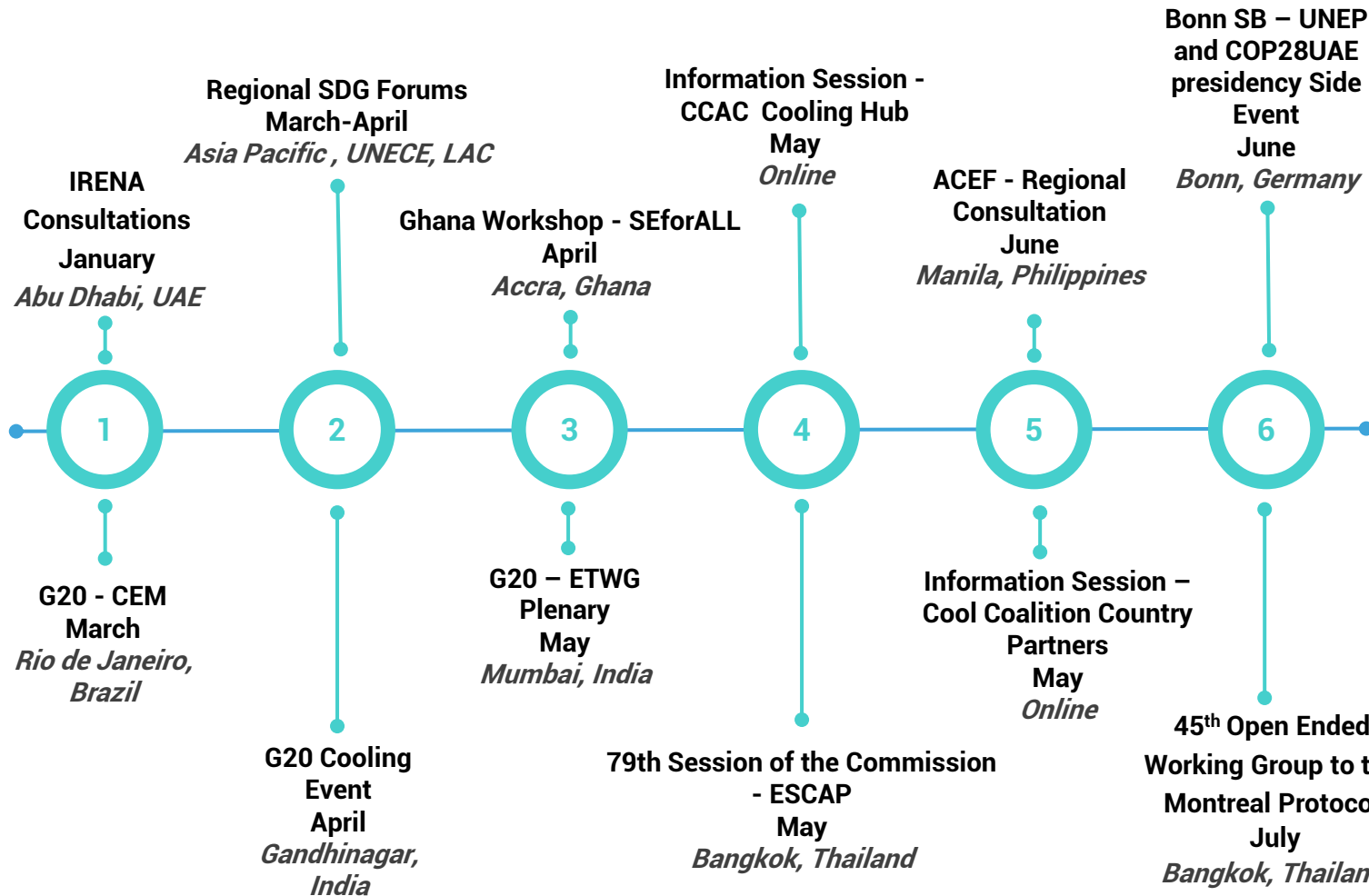


FOR MORE INFORMATION, VISIT: coolcoalition.org

GLOBAL COOLING PLEDGE CONSULTATIONS



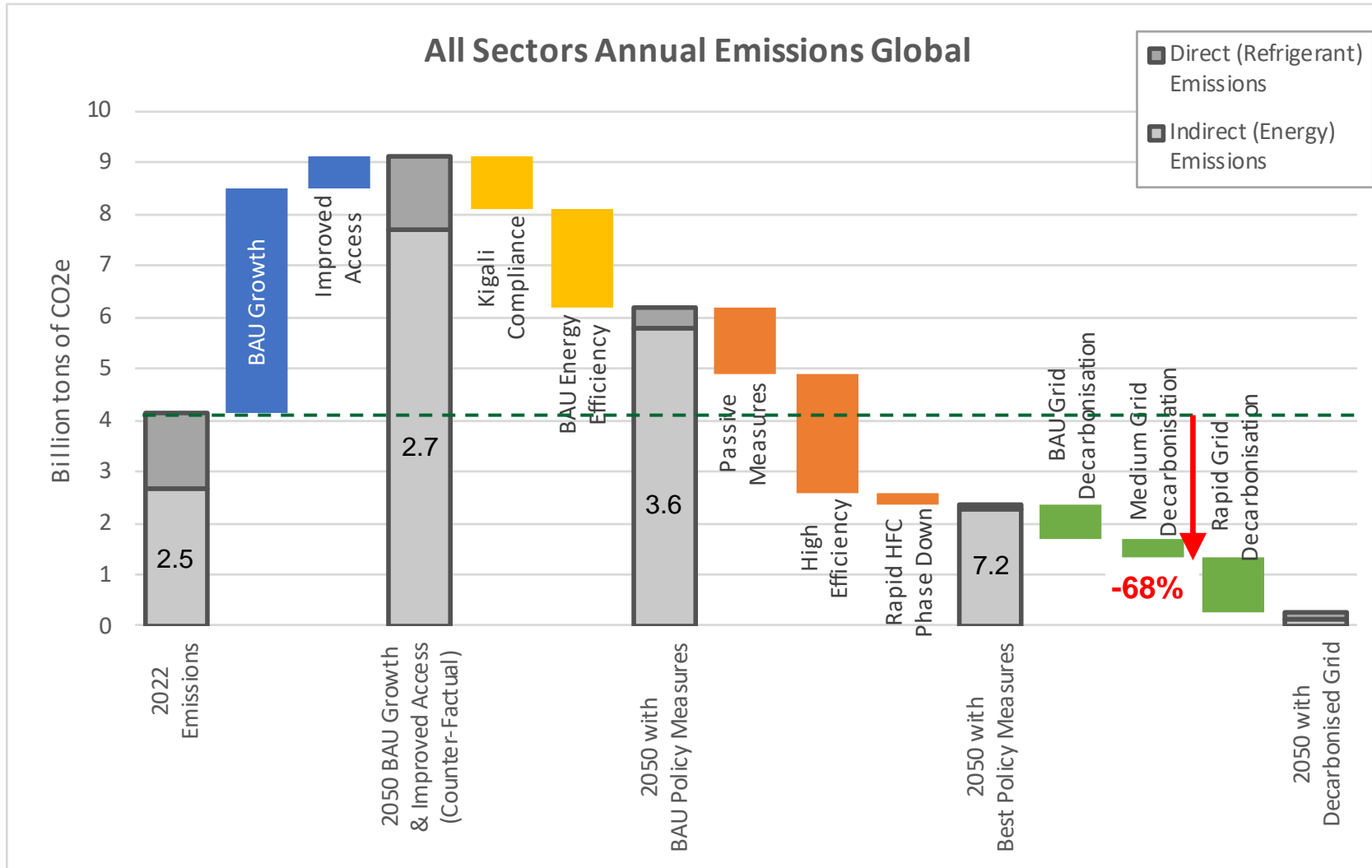
Developed through bilateral and multilateral consultations with over 100+ non-state actors and nearly 40 countries from January to July 2023.



G20 / CEM14/MI-8
July 21
Goa, India



Global Cooling Annual Emissions in 2022 and 2050



Global Cooling Cumulative Emissions 2022 - 2050

